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TRUE SCIENTIFIC SPIRIT

IN WHICH THE

CLAIMS OF PHRENOLOGY AND MESMERISM OUGHT TO BE EXAMINED.

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TRUE SCIENTIFIC SPIRIT

IN WHICH THE

CLAIMS OF PHRENOLOGY AND MESMERISM OUGHT TO BE EXAMINED.

It cannot be denied, that, in the present day, knowledge is more generally diffused, and education, as far as concerns an acquaintance with natural science, more rational, than was the case a hundred years ago, or even at the commencement of the present century. But it is equally certain, that the knowledge existing generally in society is lamentably deficient, and that the scientific part of modern education either is very imperfect, or has not yet had time to produce any very notable effect on the public mind. To convince us of this, it is only necessary to study the reception given by the world to new truths, or to statements professing at least to be truths, founded on careful and accurate observation of nature.

We are ready enough to refer to the absurd conduct of those who refused to look through the telescope of Galileo, and see with their own eyes those discoveries which they denied; and of those who could think that a compulsory recantation of an opinion founded on observation, and not yet refuted by observation, was either desirable or even efficacious, unless as a direct encouragement of falsehood. We contrast with such conduct the reception lately given to the beautiful discovery of Leverrier, by which the linear extent of our system has been doubled. And it is no doubt true, that the great truths of astronomy have been so strongly impressed on the public mind, that an extension of our knowledge, in conformity with our notions of those truths or laws, is readily admitted.

But the true question is this,—How do we receive new truths? that is, truths involving principles different from those which we acknowledge. How should we receive, for example, the announcement of a doctrine of the universe, as different from that of Newton as Newton's was from those of his predecessors? It is much to be dreaded, that a candid answer to this question would indicate a line of conduct not very remote from that of the opponents of Galileo, of

Newton, or of Harvey.

It would appear that the human mind has usually opposed an instinctive resistance, a vis inertiæ, to the progress of new ideas. Many of us can recollect, that when gas was first introduced, Walter Scott spoke and wrote of the idea as that of a visionary, and yet, before thirty years had passed, he had a gas factory at Abbotsford, and was chairman of the Edinburgh Oil-Gas Company. Here, a man of a sagacious and practical turn of mind recoiled from a great practical improvement, apparently for no other reason but that the idea was new to him. Even the history of railways, at a still later period, can furnish an entirely parallel case; and the

same may be said of steaming across the Atlantic.

If, then, where the point in dispute is so eminently practical, the first impulse be to reject the new, this is much more likely to be the case where the new doctrine treats of matters not lying on the surface, and where a personal knowledge and conviction of the truth can hardly be obtained without laborious study and observation. If, in addition, the new doctrine should clash, or should appear to clash, with established views on points on which the feelings are apt to be excited and interested, we may reckon with absolute certainty, even in the middle of the nineteenth century, on an opposition to it, very similar to that which might have been experienced in the sixteenth,—equally vehement, and, inasmuch as it originates from the passions and not from the intellect, equally unreasoning.

The reception of Phrenology by the contemporaries of Gall was a case in point. Without an attempt to verify or disprove his statements by observation, his whole doctrine was at once rejected, and he, the patient, unwearied, and sincere student of nature, was stigmatized as a quack by men who had never even looked at a brain or skull, with a view to discover the relation they might bear to the mental manifestations. Nay, an authority, yet living, who certainly was not in the habit of making physiological or anatomical investigations, actually went so far as to declare, that "there is not the smallest reason for supposing that the mind ever operates through the agency of any material organs, except

in its perception of material objects, or in the spontaneous

movements of the body which it inhabits." *

The opposition to Phrenology, on the part of Gall's contemporaries, has all the characters above alluded to. Like the opponents of Galileo, those of Gall refused to look through his telescope; but thought themselves, nevertheless, justified in denying his statements of facts, and in accusing him of quackery and imposture. In place of arguments founded on independent observation, the only legitimate answer to statements of facts founded on observation, they attempted to put him down by reasonings a priori, founded on what they chose to assume as the order of nature, or by attributing to his doctrine certain consequences inconsistent with their views of ethics and of religion; as if any doctrine truly deduced from natural facts, could be inconsistent with true religion or true morals; or as if, supposing the doctrine to be illogically deduced from the facts, or the facts to be erroneously assumed as such, the proper method of meeting it could possibly be by reasonings, either a priori or to consequences. They forgot that both these false modes of reasoning were employed against Galileo and the other discoverers above alluded to, and that the Bible was then supposed to declare that the sun really moved round the earth.

It is not in the least material to this question, whether Phrenology be true or false. Whether true or false, it appeals to facts and to nature; and no such appeal, whatever be the doctrine legitimately deduced from it, can be properly or even fairly met, except by a similar appeal to facts. Now, when we look at the history of the various attacks made on Phrenology, we find that they are almost uniformly characterised by the entire absence of facts or observations, as well as by the prevalence of the argument a priori, or the argument from the supposed consequences of the doctrine. The very few attempts at a refutation of Gall's doctrine by means of observation, which have appeared, have been either ludicrously self-contradictory, or else founded on a total misapprehension of the doctrine to be refuted. At all events they have not been successful, since each successive antiphrenologist has rejected the refutations of all his predecessors, and has been in turn rejected as insufficient by his suc-

cessors.

If we endeavour to account for the fact, that new truths, or statements of fact involving new principles, whether such statements be correct or not, are met, as they would have been two or three centuries since, not by an appeal to na-

^{*} Edinburgh Review, vol. xliv., p. 257.

ture (which, in the case of false or erroneous statements, would be the shortest, as well as the most satisfactory method of dealing with them), but by arguments a priori, assertions without proof, accusations of quackery and imposture, personal abuse, and appeals to prejudice on the score of the supposed or asserted consequences of a doctrine, we are forcibly struck with the apparent absence of all accurate notions, on the part of such objectors, of what constitutes evidence in natural science. And if we would trace this deficiency to its origin, we are compelled to admit that our boasted education is grossly defective in this point, and that the young seldom receive any instruction which can enable them to judge of the evidence produced by an investigator in support of his views of natural truth. Not agreeing as to what constitutes evidence of a natural fact, it is not wonderful that men should come to very different conclusions with respect to the inferences to be drawn from it; whereas, if all were duly trained to appreciate evidence in natural science, they would, when a new subject was presented to them, speedily come to a common decision as to the facts; and from these the inferences would follow as a matter of course, and all the time would be saved which is at present thrown away in disputes that could not occur if the disputants knew the laws of evidence in natural science.

It would be easy to quote many examples of every conceivable form of opposition to Phrenology, originating in the above mentioned ignorance of what constitutes evidence in natural science. But the chief object of these remarks is to draw attention to another instance of the same deficiency, producing the very same result, namely, a blind and prejudiced opposition to new ideas, in the case of Mesmerism.

Mesmerism, like Phrenology, is essentially a collection of facts, or of what are, at least, alleged to be facts. In Mesmerism, as in Phrenology, the observers describe what they have seen, and appeal to nature; while in Mesmerism, as in Phrenology, many individuals, without appealing to nature, without making a single observation, unhesitatingly declare the alleged facts to be no facts, and the observers to be either dupes or impostors.

Now, in Mesmerism as in Phrenology, it is of not the smallest importance in reference to the present question (which is the mode in which statements of fact should be met), whether Mesmerism be true or false, or, as Dr Forbes has it, true and false. Whichever it be, it is quite certain that the alleged facts cannot be got rid of by declaring them to be no facts, or by declaring them to be impossible, or by accusing

the observers of incapacity or of fraud, unless these assertions are made good by an appeal to facts. And yet such is

the staple of the opposition to Mesmerism.

One chief cause of this must be sought in the same want of accurate notions as to what constitutes evidence in natural science, to which we have referred the principal part of the opposition to Phrenology. Let us, therefore, endeavour to trace the process, that we may discover the fallacy or fallacies which must exist somewhere, to account for the circumstance that, while, on the one hand, statements of fact are made by those who profess to have observed them, and who appeal to nature, maintaining that every man may, if he choose, observe them for himself; on the other, these alleged facts are contemptuously rejected on a variety of grounds, but certainly without the objectors having, as they ought to have done, investigated the matter experimentally for themselves. We say that some fallacy or fallacies must exist here to lead to so strange a mode of treating a question of fact; and that if we can trace it, we shall probably find it to be the same which operated in producing precisely similar conduct on the part of the opponents of Copernicus, Galileo, Newton, Harvey, and Gall.

We do not here proceed on the assumption that what is called, in general, Mesmerism, is true. We only maintain that, whether true or false, it appeals to fact, and has been met by every kind of opposition except the only legitimate one in such a case, namely, a fair appeal to fact on the part of

the objector.

If we take the accounts of the mesmeric phenomena from the modern writers on the subject, we find that they may be divided or classified into several states or stages, which are not always found to occur in the same individual—sometimes one only appearing, sometimes another, and sometimes two or three in succession.

The first of these is the mesmeric sleep, passing, in many individuals, into sleepwaking or somnambulism. Indeed the latter may almost be described as a distinct stage. It is, however, very closely connected with simple mesmeric sleep,

and in many cases is the first stage observed.

In the next stage, the subject, still asleep, and commonly with shut eyes, can readily communicate with his mesmeriser, and often exhibits attachment to him, often also sympathy with him, with or without contact, so as only to hear, or, at least, to notice, his voice, &c. In this stage, if not in the former, the subject frequently exhibits insensibility to pain (though this is far from uniform), and community of taste.

He sometimes appears to possess introvision, and an instinctive knowledge of his own bodily state. There is often observed an uncommon acuteness of some of the senses.

In the third stage, the subject possesses all or most of the powers previously noticed, in a far higher degree; and seems to have acquired new senses. Clairvoyance, in some of its forms, is said to appear. He can, perhaps, read a closed letter, or tell the hour by a watch at the back of his head, or tell what is going on in the next room, or the next house, or next street, or even farther off still. He also, we are told, predicts accurately the course of his own disease, and sometimes exhibits a like power with reference to the diseases of others.

As a general rule, in simple somnambulism, and in all the higher stages, the consciousness of the patient is divided from that of his ordinary state, in which he has no recollection of his mesmeric proceedings. But, as in all the other phenomena, so in this, there is great variety. Some remember part, others the whole, of what occurs in their sleep. It may here be mentioned generally, but it will be more particularly alluded to hereafter, that the variety in mesmeric phenomena is so great that not only no two cases are likely to yield exactly the same result, but even the same case, at different times, may exhibit very different phenomena.

Now, there is nothing in such statements which ought to deprive them of the benefit of the ordinary rules of scientific investigation. They are surely such as can be easily proved, if true, or disproved, if false, by experimental investigation, and this would appear to be the only legitimate method of meeting them. Let us see, then, how far the opponents of

Mesmerism have or have not adopted it.

1. The first objection commonly urged is, that the higher phenomena, such as those of clairvoyance, are impossible or incredible, and must therefore be rejected; and as a corollary from this proposition, it is also maintained, that those who profess to have observed such phenomena, are either themselves impostors, or the dupes of fraud on the part of the

subjects of their observations.

To any one accustomed to scientific research, it is at once obvious that such a mode of getting rid of the subject, for it cannot be called argument, is altogether unscientific and inadmissible. It assumes, first, that we know the utmost limits of the natural powers of man, and are able to declare, a priori, what is possible and what is not. Such power, it is needless to say, we do not possess; and in point of fact, our real knowledge of the natural powers bears the same

ratio to that which is unknown, as the science of Newton, in his own opinion, did to the vast mass of undiscovered truth, when he compared himself to a child picking up pebbles on the sea-shore, Secondly, It assumes the right to deny the bona fides or capacity of the observer, merely because we cannot account for the facts to which he testifies. Now, in reference to this point, it may be safely laid down that the bona fides of an observer is on no account to be denied, unless his previous conduct have given good grounds for doing so. And it is more especially our duty to give every observer credit for truth and honesty, when the facts he states are such as may easily be ascertained by experiment. act otherwise, is to infringe, in the most direct and inexcusable manner, the Divine precept, "Whatsoever ye would that men should do unto you, do ye even so unto them." The generation now passing away had a striking lesson on this duty in the history of Bruce of Kinnaird, the Abyssinian Traveller, whose statements of facts, to which he was eyewitness, were contemptuously classed with travellers' tales, although the truth and candour of Bruce were previously unimpeached, merely because these statements were startling, and the authorities of the day chose to consider the facts impossible. The lapse of time, however, has shewn that Bruce had strictly adhered to truth in all his statements; which have been fully confirmed, even where apparently most improbable, by subsequent travellers in Abyssinia. No one now hesitates to admit that those who accused Bruce of mala fides were alike deficient in justice and in logic; and the same judgment is impending over those who have accused the writers on Mesmerism of fraud, merely because the facts they described could not be explained or accounted for.

Here it may be observed, that there is a remarkable tendency in the human mind to be satisfied with any thing which wears the aspect of an explanation of natural truth, even where, in reality, nothing is explained and nothing accounted for. It is easy to find many persons who attach great importance to Newton's law of gravitation, not because it enables us to classify the facts, to remember the law according to which they occur, and with the aid of that law to predict new facts occurring under it, but as accounting for the phenomena, as explaining why bodies attract each other. It is not, then, very wonderful, that those who suppose that they are accounting for gravitation, when they are merely stating the facts in a connected form, or, in other words, the law according to which, and not the cause in consequence of which, they take place; it is not, we say, wonderful that

such persons should ask for an explanation of the facts of Mesmerism previous to admitting them; and, finding them quite unaccountable on all ordinary principles, should reject them; little aware that were we to reject all that we cannot explain or account for, little, or rather nothing, would be left. Who can explain life, or thought, or sensation, or the various attractions through the play of which our universe Who can tell why the needle points to is sustained? the pole, or deviates from it when a small magnet is approached, although we can measure the amount of deviation? Who can tell how a copper wire, in conducting a current of electricity or of heat, becomes a magnet, although the magnetic force of the current be measurable? Who can explain why or how an acid and an alkali neutralise each other, although we can measure the force of their attraction? Let us look where we may, we shall find the ultimate causes of all natural phenomena quite unknown to us. But we do not, on that account, deny the facts of life, sensation, and thought; of astronomy, magnetism, electricity, and chemical action. Still less do we accuse the observers of these facts of mala fides, because we cannot explain them. "True," it may be said, "but these facts are obvious to our senses, and we cannot deny what we see." But it must not be forgotten, that these very facts, or many of them—for example, the great facts of astronomy-were actually long denied, notwithstanding their obviousness. And, on the other hand, the observers of Mesmerism appeal to nature, and assert that if you look there you will find it impossible to deny or doubt the facts of Mesmerism, just as you find it impossible to deny the facts of electro-magnetism, strange and unaccountable as they are. Now we maintain that such an appeal cannot be disposed of by sheer denial of the facts, or in any other way than by an appeal to observation; which, if the facts be only alleged, and not true facts, must be a very short and easy operation.

In reference to the first objection, then, it must be admitted, that it is no valid answer to statements of facts in Mesmerism, to say that the higher phenomena are impossible; and also, that the difficulty or impossibility of accounting for the facts does not entitle us, any more than it did the calumniators of Bruce, to accuse of *mala fides* observers of character previously unimpeached.

2. The next objection we shall notice is that drawn from the supposed consequences of admitting the mesmeric phenomena. It is said that the Creator never could have intended to confer on man such powers as appear to be exhibited in certain mesmeric cases, as, for example, the power of predicting future events. It is also said, that the unbounded influence acquired by the mesmeriser over his patient is most dangerous, and capable of being perverted to the worst pur-

poses.

In considering objections of this class, the first thing that strikes us is, that the existence of any real fear of bad consequences implies belief of the facts themselves. We cannot fear the perversion of that the existence of which we deny. If, therefore, Mesmerism be altogether the result of fraud and imposture, these evil consequences must be imaginary. If, on the other hand, the facts be admitted, as they must be by those who sincerely dread such consequences, then we maintain that, in all questions of natural fact, we are entitled only to ask, "Is this true?" "Does it exist?" and not, "What are its consequences?" If the alleged fact be true, it must be the work of God; for human nature can possess no powers which are not derived from Him. This being the case, the dread of evil consequences argues an imperfect acquaintance with His works, and should rather act as an additional inducement to us to investigate these obscure phenomena, than lead us to neglect the additional knowledge to be obtained by such researches.

With regard to the influence of the mesmeriser over his patient, in some cases it appears to be great, in others limited, in others again it is absent. The abuse of this power can only be dreaded by those who admit its existence, and there is no reason to suppose that it is more liable to abuse than other powers or agencies, none of which are exempt from the liability to abuse. The best security, in all such cases, is not

ignorance but knowledge.

In reference, therefore, to this second class of objections, it is plain, that, where entertained, they can only be so by those who admit the facts; and it is equally obvious, that to reason against a natural fact from its supposed evil consequences, is contrary to all the rules of scientific research, which, in all cases where *facts* appear to lead to evil results, prescribe, not a denial or oblivion of the facts, but a more diligent study of them, in the conviction that no natural truth, when fully understood, can be otherwise than beneficial to mankind.

3. Another class of objections, on which great stress is laid, is that drawn from failures in mesmeric experiments.

Here it must be observed, in the first place, that one well-attested instance of success will overbalance, as evidence, hundreds or even thousands of failures, which, in that case, can only prove at the utmost, that we are not sufficiently

familiar with the conditions of success. To borrow an illustration from another department of science—when a chemist of known accuracy, announces the discovery of a new and remarkable compound, and describes a process for its production, and when other chemists, on first repeating the process, fail to obtain the desired result, they do not conclude that the statement is false, but simply, either that the necessary conditions have not been described with sufficient minuteness, or else that they have neglected some one or more of these conditions; and they repeat the experiment till it succeeds, or apply to the discoverer for more detailed instructions. This happens every day in chemistry; but what would be thought of a chemist who should refuse to try the experiment, and yet consider himself justified in denying the truth of the discovery, and accusing his brother chemist of imposture, because it appeared to him impossible, or because he could not account for it?

But, in the second place, when we consider the special case of Mesmerism, we perceive many reasons why failure in obtaining certain results is a circumstance of even less weight and importance than in such a science as chemistry. mesmeric experiments, the conditions of success are much less known. From the very nature of the subject of experiment, namely, the living nervous system, it is far more exposed to variations arising from causes apparently slight, but in reality only imperfectly studied, than the dead subjects of chemical research. There are many experiments even in chemistry, in which a difference of a few degrees in temperature will cause utter failure. How much more probable is it, then, that the nervous system should be affected by a great variety of causes of uncertainty and failure! Every one knows in his own experience, that the mental powers, and indeed the bodily powers also, are not at all times alike. The poet is not always able to rhyme, nor the musician to compose, with equal success; and the slightest variations in the state of health, especially in nervous temperaments, produce corresponding variations of mood or humour, as it is called. Why, then, should it appear strange that the powers possessed by individuals in the mesmeric state should vary at different times? Ought we not rather to expect that which, according to all writers on Mesmerism, actually occurs—namely, that the mesmerised person shall at one time possess powers which at another time are absent? It would indeed be strange if mesmeric phenomena alone exhibited a uniformity never seen in the other phenomena of the nervous system.

But further, there are other causes of failure, to which mes-

meric experiments are peculiarly liable. The first of these is a consequence of ignorance on the part of the experimenter, of the facts just alluded to, and of a confidence in the results, which, if not justified to the full extent by a careful study of the subject, is, at least, a strong indication of the bona fides of the observer. We allude here to the boldness with which those who have once obtained certain results in a given case, undertake, even in public, to exhibit and demonstrate the same results, and thus to convince sceptics. Now, these bold exhibitors, in many cases, not only do not practically attend to the considerations above stated as rendering occasional failure possible, but, also, neglect other considerations which render it even probable. Of these the most important are, the exhaustion of the subject, the arbitrary alteration of the conditions of experiment, and the effect, on the mesmerised subject, of the proximity of many persons, or indeed of persons other than the mesmeriser, and especi-

ally of the sceptical and uncandid.

It frequently happens, at exhibitions of mesmeric phenomena, whether public or private, that certain experiments, requiring the full powers of the individual, are tried when he is already exhausted by a long series of efforts, and when, therefore, his answers are more or less unsatisfactory. This cause of failure is obvious and easily avoided; but there is another which is less so; we mean the arbitrary alteration of the conditions of experiments. For instance, we shall suppose that an individual is said, when mesmerised, to acquire the power of reading a closed letter, or the page of a book covered with twenty other pages, or the dial-plate of a watch laid on the epigastrium, or held near the occiput. The experiment is tried, and succeeds; but a sceptic starts up and declares that he, for one, is determined not to be taken in; that, in the experiment just performed, collusion and imposture were possible; and if he does not actually assert them to have been employed, he gives it to be understood pretty plainly that such is his opinion. He will not, he says, be satisfied, unless the clairvoyant shall read a letter inclosed in several folds of paper, and shut up within a box, perhaps in the inner one of two boxes; or else he insists that the eyes of the clairvoyant shall be closed with strips of adhesive plaster, and bandaged in half a dozen towels and handkerchiefs, with the aid of pledgets of cotton wool. Without this, he will not believe; the mesmeriser and his clairvoyant, without having ever tried the proposed method, at once agree to his preposterous demand (a striking proof, by the way, of bona fides on their part); and the experiment now fails, as was

indeed most probable. Now, this we call arbitrary alteration of the conditions of experiment, altogether unwarranted on the part both of sceptic and exhibitor. On what ground does the latter undertake to do what he has never yet done? By what right does the former dictate to Nature conditions, without which he will not believe? The truth is, that both are misled by theory. The exhibitor unconsciously flatters himself that he can explain how his patient sees with his eyes shut, and does not mind an additional obstacle or two; while the sceptic takes a most erroneous view of the province of the experimenter in scientific research, whose duty it is to observe and record the phenomena presented to his view, whether by simple observation or by experiment, but who has no right to dictate to Nature the conditions under which she must exhibit a fact. He is at perfect liberty to try any form of experiment he chooses; but he is, at the same time, bound, above all, to study the fact, as presented to him by Nature. To return to our case—he may try as many experiments as he pleases, and on any conditions, however arbitrary and absurd, that he chooses to impose; but he is not entitled to say that his belief, or that of others, depends, or ought to depend, on the fulfilment of these conditions; for he is bound to study the case under the natural conditions, that is, those under which the fact was first observed. All writers on Mesmerism agree in this, that a patient may exhibit clairvoyance when his eyes are shut, and the object to be seen or perceived is behind his head; but it is nowhere stated that he is certain to succeed if, in addition, his eyes be glued up and loaded with bandages, in the way recorded by some profound sceptics. Indeed, were such a statement to be made, we should instinctively reject it as absurd. Is it conceivable that the horrid discomfort of such a blinding operation should have any other than a most injurious effect on the powers of the patient? That, in some such cases, the experiments succeed, in spite of the obstacles thus unwarrantably raised against them, only shews that some patients are less easily annoyed or disturbed than others. We must never forget that it is quite possible that any change in the conditions may cause failure, and that, at all events, to promise, or to demand, before trying the experiment, that it shall succeed, the conditions being altered, is as rash and unjustifiable on the one part, as it is illogical and unreasonable on the other. At all events, it is plain that the exhibitor is to blame who tries such a variation of the original experiment for the first time in public, in perfect confidence of success; and that very often, were he first to try it in private, he would find himself

compelled to say that such varied experiment would not succeed. Failures of this kind, therefore, only prove the rash confidence of the exhibitor, and, while they speak in favour of his bona fides, they argue a very limited acquaintance (such as we fear is too common among exhibitors of Mesmerism) with the phenomena which he professes to demonstrate.

There is entire unanimity among the chief authorities on Mesmerism in regard to this—that the proximity of other persons besides the mesmeriser, produces in many patients a degree of disturbance highly unfavourable to the successful exhibition of the higher powers; and that this is particularly observed when the patient is in proximity to a person in a sceptical, above all, in an uncandid frame of mind;—that, for example, the approach of a person who is convinced that the patient is guilty of fraud, and has probably expressed this opinion to the company, will often deprive a clairvoyant of his whole power. Nay, it is stated by all writers on the subject that the patient will often detect this state of mind in those with whom he is placed "en rapport," although it has been concealed from all. Deleuze mentions a very striking instance of this, where the sceptic, finding that his secret thoughts, thus read, acted as an impediment to the further exercise of clairvoyance, became convinced that imposture could not account for this, and, investigating the matter for himself, became a distinguished mesmerist. But it is sufficient here to state that such is the uniform testimony of all the authors on the subject. Now, this being the case, it is plain that a very large proportion of public failures must admit of being thus explained; or at least, that those who state the fact as we have here given it, would be entitled, on their own principles, to predict numerous cases of failure under such circumstances. Such failures, therefore, if they prove anything at all, prove the truth of Mesmerism, by demonstrating one of the most curious mesmeric phenomena, namely, the alleged power of penetrating the thoughts and sentiments of others,—or, as it may be called, occult mental sympathy, and the extreme sensitiveness of the mesmerised patients. Of course we understand that the failure shall be distinctly traced to this cause, as in the case mentioned by Deleuze.

These considerations are not to be regarded as ex post facto attempts to explain failures. We offer them, on the contrary, as views deduced from the writings of the best authorities on Mesmerism, which would lead us, a priori, to contemplate the probability of numerous failures in experiments performed under the circumstances we have mentioned; and which, so

far from having been made use of by exhibitors generally to account for occasional failures, have been altogether neglected by them; a neglect, which has led to by far the greater part of the public failures in Mesmerism.

In reference, then, to the argument against the truth of Mesmerism, derived from the occasional failure of experiments performed in public, our remarks may be briefly

summed up as follows.

Like all other phenomena of the nervous system, the phenomena of Mesmerism are subject to frequent and great variations.

The conditions of success being much less known than in other experimental sciences, mesmeric experiments are even more liable to failure than others.

The exhibitors of mesmeric phenomena, ignorant of this, or not attending to it, expose themselves to failure by undertaking to perform exactly what they have performed before.

The patient may vary in his power on different days, or from slight changes in his health, or from exhaustion in previous experiments; and in all these ways failure may take place.

Again, the sceptic often unwarrantably dictates new conditions of experiment, which are rashly accepted; and failure

is the result.

Lastly, the proximity of persons in a sceptical, above all, of persons in an uncandid, prejudiced state of mind, has a powerful and most unfavourable influence on many susceptible sub-

jects; and many failures are thus accounted for.

But even supposing that failures should occur not admitting of explanation in any of the above ways, still it remains indisputable that the evidence derived from one successful experiment carefully observed and accurately reported, far outweighs that deduced from a hundred or a thousand failures, which can at most prove that we cannot do what others have done.

It is hardly necessary here to do more than allude to certain cases of alleged failure, in which the only cause of failure has been the extravagant and unreasonable expectations of the experimenter or of the sceptic. A sceptic, having read the account of the mesmeric phenomena exhibited in a case, and having, perhaps, soon after, the opportunity of seeing another case, quite new, proceeds to examine it, and instead of studying the case as presented by Nature, he insists that the patient shall either do all that the other patient was said to do, or submit to be denounced as an impostor. Without some experience of the style of reasoning prevalent among

what may be called lay sceptics, that is, sceptics without scientific training, it is difficult to imagine the extent to which bad logic can be pushed. Yet nothing is so common as to hear a person ask, as a test of truth, on being told that another has been thrown into the mesmeric sleep, "Is he clairvoyant?" and nothing is so difficult as to convince such a person that a patient may experience the mesmeric sleep, without possessing a trace of clairvoyance, or even of insensibility to pain. But we can hardly be surprised that lay sceptics should reason thus, when we find a medical man asking of a patient who was said to exhibit insensibility to pain or some other mesmeric phenomenon, "Does he read with his belly?"—as if any writer on Mesmerism had ever stated, or even hinted, that each patient must exhibit the higher phenomena or all the phenomena; or, as if the truth of one depended on the existence of the other.

We shall not dwell on the singular objection to Mesmerism, namely, that it proceeds from the Arch-fiend, and is to be shunned and denounced as a snare of Satan. This objection, like those which refer to consequences, presupposes the truth

of the facts.

Having thus briefly gone over the common objections to Mesmerism, it plainly appears that they are, for the most part, founded on ignorance of the laws of scientific evidence; and that, if the evidence produced in favour of the alleged facts of Mesmerism is to be treated as scientific testimony on questions of fact generally and very properly is, then the essential points in the statements of the chief writers on the subject must be admitted.

We have already established a parallel between Phrenology and Mesmerism in regard to their first reception; and it appears to us that this parallel may be extended somewhat further, so as to embrace the present state, and widely extend-

ed reception of both.

With regard to Phrenology, the Edinburgh Review no longer ventures the amazing dictum, "that there is not the smallest reason for supposing that the mind ever operates through the agency of any material organs," except those of the external senses and voluntary motion. Not only is the brain allowed to have a connection with the mind, but it may be looked on as a generally received truth, that the forehead is the seat of the intellectual powers, so that no man with a view to intellectual superiority, would desire for his son a low and contracted forehead. It is even very generally admitted that the coronal region is connected with the higher

moral sentiments, and that the basilar and posterior regions bear a similar relation to the animal propensities. It is very common to hear the great regions of the head admitted, while the detail of each, that is, the existence of the organs of the special mental faculties, is denied or doubted. merits of Gall, as an anatomist, are universally admitted; nay, even his classification of the mental faculties is extensively acknowledged as superior to those of his predecessors. But it is supposed, somehow, that he first of all constructed his system of faculties, and then deduced the special organology from the great regions above mentioned, very much according to his own fancy. Nothing can be more remote from the truth. Gall first noticed the organ of Language, seated in the anterior lobe; next, perhaps, that of Locality, also seated there; then that of Love of Offspring, seated in the occiput; and so on-for years, without even the idea of the three great regions, till the greater number or the whole of his faculties and their organs being fixed, he then noticed that the organs of the intellectual faculties were all in the anterior lobe, those of the moral sentiments in the coronal region, and those of the animal propensities in the basilar and posterior parts of the brain. Those, therefore, who admit the three great classes of faculties, with their corresponding regions (which they almost instinctively feel to be true), are not aware that this admission implies that of the very details to which they object, inasmuch as the former have been established only through the latter. Instead of, as they suppose, assuming a class and locality of moral feelings, and mapping this out into organs of Benevelence, Veneration, &c., Gall did the very reverse; for he discovered, one by one, the organs of these and other sentiments, and found at length that they were allied in nature as well as in the position of the organs, and thus formed one of the great classes with its corresponding region of the brain. The details, then, which are denied, proved or established the general fact which is admitted.

In regard to Mesmerism, in like manner, a great change has taken place. Formerly, the whole subject was denounced as a deliberate imposture. Now, the charge of imposture, when made, is confined to some of what are called the higher phenomena, and a general impression exists that "there is something in Mesmerism."

On examining a little more closely, we find that one mesmeric phenomenon, namely, the existence of a peculiar state, called the mesmeric state, the mesmeric sleep, the mesmeric coma, somnambulism, sleepwaking, &c., is now almost uni-

versally admitted. Indeed it is difficult to conceive how it could ever have been denied, considering the abundant testimony of all ages to its occurrence as a spontaneous condition. We are prepared to maintain that the testimony in favour of its production by artificial means, such as mesmeric passes, is quite equal to that which establishes the fact of spontaneous somnambulism; nay, that it is absolutely irre-The admission of this state as produced by Mesmerism, or even as a spontaneous phenomenon, we look upon as the turning point of the controversy, as important to Mesmerism as the admission of the three great classes of faculties and the three regions of the brain is to Phrenology. Before, however, making some observations on the bearings of this point, we may remark that another mesmeric phenomenon either is now or very soon must be admitted as universally as the existence of somnambulism. We refer to the production of insensibility to pain by Mesmerism.

It is not going too far to say, that no natural fact is more satisfactorily established than this. Even the first case recorded in England of the performance of a capital surgical operation without pain on a man in the mesmeric state (the case of the man Wombell, reported by Messrs Ward and Topham), is supported by an amount of testimony, such as, in any other case, would have commanded instant belief, and such as in every unprejudiced mind will produce entire conviction of the truth of the statement made by the patient and the gentlemen who mesmerised him and performed the operation. The whole account of the case bears the obvious impress of truth; and the manner in which it was received by the London Medical and Chirurgical Society is a very marked instance of the prevalence of those fallacious notions of what constitutes evidence in such cases, to which we have already referred, and will long remain a lasting stigma on that bodv.

But so far is that case from being a solitary one, that hundreds of similar cases have since been reported, and among these upwards of 100 painless operations performed by one gentleman, Dr Esdaile, in the presence of numerous officials of the East India Company and others, in the Company's Hospital at Hoogly. We look on the mass of evidence adduced to shew the production of insensibility to pain by Mesmerism, by Dr Esdaile in his Mesmerism in India, as many times more than sufficient to establish that point, had

cases collected by Dr Elliotson, and published in the Zoist, on

the authority of the operators.

When we look at this testimony, we are at a loss even to imagine in what way it can be evaded. We cannot doubt that the same amount and quality of evidence would prove entirely satisfactory, on any other subject, to the opponents of Mesmerism; and we are therefore compelled to believe that the feelings, in this instance, are so warped by prejudice as not to recognise the presence of convincing evidence. Indeed we have recently had a complete demonstration that the difficulty lies not in the absence of evidence in favour of the fact, but in the state of mind of the recipient. We allude to the discovery that insensibility to pain may be produced by

inhaling the vapour of ether.

When this fact was first announced, it came to us on the authority of two or three respectable American surgeons, unknown, however, even by name, except to a very few private friends in this country. The number of cases was very small, and the facts of these cases were described, as nearly as possible, in the very same words as the painless mesmeric operations. Yet, up to this time, there has not appeared a doubt as to the truth of the facts. They have been, if not at once considered as established, at once received, as alleged facts ought to be, respectfully; they have been repeated, and, being true, of course confirmed. Above all, no one has ventured to say that the American surgeons or their patients were impostors. In short, this discovery has been received as it ought to have been.

How different was the reception of Mr Ward's case, above alluded to! in which the patient was publicly accused of deliberate imposture, because he declared he felt no pain. It was held to be a proof of fraud, that he said he heard "a sort of crunching" when the bone of his leg was sawn through, while he felt no pain in it; but precisely analogous statements are every day made by those rendered insensible to pain by ether, and are not supposed to prove the existence

of fraud.

The two cases are absolutely parallel; except that during the first fortnight of the ether discovery, perhaps much later, the balance of testimony, both in point of amount and of quality, was vastly in favour of the truth of the mesmeric method of causing insensibility to pain. And yet, while the power of the ether was at once admitted, not only was that of Mesmerism denied, but the patient and operators were, and by some still are, publicly accused of fraud and imposture. It is plain that, in the latter case, some very strong

prejudice blinded the mental vision to the force of the testimony which was absolutely, in point of cogency, the same as that which in the former case produced instant conviction. We rather think that many imagine that they can understand, account for, or explain, the action of the ether, which is a tangible material agent, whereas the action of Mesmerism, being of an intangible or spiritual nature, appears to them incapable of being explained; therefore, the alleged result is incredible, impossible, forged! It is hardly necessary here to add, that we can as little explain the mode of action of

ether as we can that of mesmeric passes.

As little is it necessary here to point out that this discovery of the power of ether is destined to clear away an enormous mass of prejudice still existing on the subject of Mesmerism. When people are accustomed to believe (and already hardly any one doubts this), that insensibility to pain can be caused by artificial means, they will easily discover that there may be various modes of doing this; and as soon as they try the experiment, they will find that one of these is the so-called mesmeric process. They will also find that passes are far from being the only means of producing the mesmeric state. All this will take place before long; and people will ask themselves with wonder, how they were ever able to shut their eyes to the evidence laid before them of the power of Mesmerism in producing insensibility to pain; and, above all, how they could so far forget the dignity of scientific investigation as to accuse medical gentlemen of the highest honour, and patients whose characters had been till then unimpeached, of conspiring to deceive the world by such stupid, unmeaning frauds; frauds, moreover, which must infallibly have been exposed in a very short time.

Let us now consider for a little the bearing on the whole controversy of what we have just stated; namely, that the existence of the mesmeric sleep as a result of certain processes is recognized; and that the artificial production of insensibility to pain, in like manner, is, or presently will be,

generally admitted.

The former of these is an immense step gained. It is but a few years, or rather months, since even the very existence of the mesmeric sleep was flatly denied, and those who, having seen it, professed their belief in it, were designated as either duping or duped, either rogues or fools. But now, most persons who have thought on the subject at all, are ready to admit the sleep, even while they deny most vigorously the existence of clairvoyance. In regard to the sleep, they seem to have a notion that they get rid of the matter

by ascribing it to the imagination. "No doubt," they will say, 'the mesmeric sleep exists, but it is entirely caused by the imagination." Be it so; and let it be granted that those who use this phrase mean merely this, that the body is ultimately affected so as to cause sleep, in consequence of a previous affection of the mind reacting on the body through the The questions still recur—Is this peculiar state producible by artificial means? And what is the state? Surely if the imagination, in what way soever, can give rise to the phenomena of somnambulism, it is time to study the imagination, and to trace the laws and conditions of its action, of which, on this supposition, little or nothing is yet known. And surely it is equally plain, that to ascribe these phenomena to the imagination, if the phenomena be true, is not to explain, nor even to simplify them, but only to add another link to the chain of causes which have been supposed to give There is, in many minds, a vague notion, that rise to them. to ascribe anything to imagination, renders it imaginary, or rather annihilates it; whereas if a phenomenon, such as the mesmeric sleep, be true, it is not the less a substantial fact because it has been brought on through or by the imagination, that is, in consequence of a mental impression, as there is no doubt it can be.

The only real question, then, here is, that of the reality of the phenomenon of the mesmeric sleep. We cannot on any theory yet proposed explain its nature or origin, but we can convince ourselves of its existence. And here it may be confidently stated, that the recorded testimony to the fact is, in precision, in fulness, in consistency, and in the trustworthiness of the witnesses, equal, if not superior, to any collection of testimony bearing on any point in natural science which can be pointed out. Accordingly, in spite of prejudice, and in spite of the prevailing fallacy which leads men to reject that which appears incredible or impossible, or which cannot be explained or accounted for, for no other reason but that it appears incredible or incomprehensible, the conviction is generally spread among well-informed people, that the fact of the mesmeric sleep is established, while even the most sceptical are heard to say that there is "something in it."

But it is impossible logically to admit this fundamental fact, without at the same time admitting a great deal more. If the operator, and the patient whom he throws into the mesmeric sleep, be in regard to that phenomenon trustworthy and accurate, we cannot suppose that they should become all at once dishonest in regard to the subsequent stages

of somnambulism. Again, if there be one fact connected with the sleep more firmly established than another, it is that of the divided or double consciousness, or the circumstance that the somnambulist, when awake, does not, as a general rule, recollect what has occurred during his sleep, although he may recollect it in his next sleep. To this rule there are exceptions; and this fact is of itself a strong proof of bona fides in the patients. Were they impostors, they would all exhibit what is believed to be an essential mark of the true mesmeric sleep. Now if this divided consciousness exist, a lesson in fraud given in the waking state would be of no avail in the sleep. If it be said that the fraud is devised and carried out in the sleep, this admits the sleep as a fact, and we come again to the altogether inadmissible theory that all the patients and their mesmerists who have told the truth as to the first stage of mesmeric sleep, at once rush into deliberate falsehood in regard to the more advanced stages. We have seen many who admit the entire truth of the first, which they consider the least marvellous stage of the mesmeric condition, yet who absolutely reject the higher phenomena. Now it does appear to us very wonderful indeed, that such persons, professing a wise incredulity, should either admit the existence of so astounding a mass of deceit appearing in the same forms in all parts of the civilized world, on the part of persons who give a true account of the earlier phenomena; or should not perceive that this is implied in their utter rejection, as the produce of fraud, of the higher, while they admit, as facts, the lower mesmeric phenomena. Least of all, are those who adopt so amazing an hypothesis as that of the existence of fraud in all mesmeric cases, entitled to sneer at Mesmerism as a theory.

Having felt from the first, that the testimony in favour of the facts of Mesmerism was of such a nature as to entitle the subject to the most earnest and careful investigation on the part of all who feel an interest in natural truth, we have availed ourselves of such opportunities as have been presented to us of studying the phenomena. This we have done in private, because, from the very nature of the thing, it is very ill adapted for public exhibition; and we have, in several instances, seen and produced the ordinary mesmeric sleep, entire insensibility to pain, divided consciousness, and some others of the more common phenomena. It is altogether unnecessary here to specify cases or details, inasmuch as, with peculiarities in each case, the general results are precisely such as have been described with perfect truth in hundreds of published cases. Most of our observations were

made on individuals who had never been exhibited, even in a private party, and some of them had never been mesmerised before. We cannot possibly be more certain of the entire absence of wilful deceit or fraud in any persons or circumstances whatever, than in these cases; and we are bound to say, that, as far as they go, they entirely confirm the statements of all the best writers on Mesmerism.

But our opportunities have been but very limited, and we have not yet met with the higher phenomena, more especially clairvoyance. Still it would be contrary to all sound principles of reasoning were we, on that account, to deny the existence of clairvoyance, seeing that it rests on the testimony of the very same persons whose statements, in regard to the lower phenomena, we have found to be not only true, but in a high degree accurate and minute. And it would be even far worse, were we, because of our own want of success in the attempts to elicit those higher phenomena, to accuse of imposture those same observers whose testimony we have in other points found to be so trustworthy. involuntary, and no one can insist on our believing the existence of clairvoyance when we have not seen it. But not to believe or feel satisfied of the fact is a very different thing from accusing of falsehood those who say they have seen it, and whom we have no reason to doubt. On the other hand, it is not always necessary to see a fact in order to believe it. There are many facts which we believe on testimony, without having ever seen them; and it cannot surely be said that no amount of testimony would be sufficient to convince us of the existence of clairvoyance. There are many people, nay there are probably some medical men, who have never seen a case of ague, yet none of these persons doubts that an ague can be cured by means of quinine. Why is this? Simply because the testimony is sufficient. It cannot be said that the power of quinine to cure ague is more easily explained than clairvoyance; for those who have most studied the subject, best know how far we are from any thing approaching to a satisfactory theory of the action of quinine, or indeed of any other remedy. It is well remarked by a modern writer on physiology, that, in truth, the formation of a crystal is to the full as wonderful as the production of an organized being; and we may say, that our ordinary nightly sleep is not less wonderful than clairvoyance, as far as concerns our ability to explain these phenomena.

While, therefore, we have not yet been able to see any case in which the highest mesmeric phenomena have occurred, we find it utterly impossible to resist the mass of recorded testi-

mony, both of the dead and of the living, on this point. doubt not that there may have been exaggeration; that the phenomena may frequently have been ill observed; and that many fallacious theories may have been founded on them: but making all possible allowances, there remains an amount of absolutely unimpeachable testimony, more than sufficient, if fairly weighed, to prove that, in the higher stages of the mesmeric sleep, the patient frequently acquires powers which, in his waking state, he does not possess. Whether these powers be acquired merely through an exaltation of the delicacy and acuteness of the ordinary senses; or whether, as some suppose, a new sense or senses be developed; or what, finally, may be the explanation or the true theory of these facts, we cannot say; but the evidence of the facts we hold to be irresistible, and to be such as, in any question where prejudice was not excited, would never for an instant be doubted. It is not within the limits of possibility, practically, that so many observers, during the last sixty or seventy years, in so many different places, and under such various circumstances, should, in regard to clairvoyance, agree on all essential points, unless the facts were facts; and besides, the very idea of deceit on the part of all these observers is at once felt to be preposterous.

The testimony of modern observers on this subject, is greatly strengthened by the existence of numerous recorded cases of spontaneous somnambulism, exhibiting powers far beyond the ordinary reach of the senses; of double or alternate consciousness; and even of insensibility to pain. And although there be little recorded exactly corresponding to mesmeric clairvoyance, yet the agreement of the descriptions of the recorded cases with those of mesmeric somnambulism in all the recorded phenomena, is such as to give us great confidence in the accuracy of the modern reports. There are, however, some facts recorded, which would seem to indicate that some of the higher mesmeric phenomena had been observed as spontaneously occurring, generally in cases of disease of the nervous system, such as hysteria and catalepsy;

and usually ascribed to supernatural influence.

This leads us to notice the very common objection urged by those who are not so ready as some are to charge others with falsehood; namely, that the mesmeric phenomena, being observed only in "hysterical females," are, on that account, unworthy of attention.

We profess our inability to perceive the cogency of this argument. It cannot be meant that a fact is less a fact because it occurs as a symptom of hysteria. It is probably in-

tended to maintain, that hysterical females are so fanciful, and so uncertain, that their statements cannot be relied upon. But surely no one will maintain that it is impossible so to study an hysterical case, as to ascertain the presence or absence of certain facts or powers. Even admitting the existence, in all cases, of what probably occurs in some cases of hysteria, namely, a peculiar proneness to deceit, there are many things that can be ascertained in spite of that tendency, which is in itself a very curious phenomenon, and worthy of careful study. Indeed, if such a deceitful patient were capable of simulating the mass of recorded mesmeric phenomena, even in a small degree, this power would be quite as wonderful as clairvoyance.

But, in truth, mesmeric phenomena are just as often seen in persons not at all hysterical, as in those affected with hysteria, and nearly as often in males as in females; and if there are some cases in which a tendency to deceit appears, this has been noted and described by the writers on Mesmerism themselves, while they all agree in the statement, that a most frequent characteristic of the mesmeric state is an exalted moral sense, and the highest degree of truth and sin-

cerity.

There is another point connected with Mesmerism which must here be noticed. We allude to its employment as a remedy. There can be no doubt that if one-tenth part of the evidence which has been published, as to the remedial employment of Mesmerism, had been produced in favour of a new drug, it would long since have been tried by every practitioner. Here we see the same fallacy that has caused the difference between the reception given to the alleged facts of insensibility to pain, as produced by Mesmerism and as produced by ether. Men imagine, that where certain properties are ascribed to a drug, a tangible means of acting on the system, it is, somehow, easier to understand the result than where there is nothing material employed. There cannot be a greater fallacy; for, in the case of the drug, we only know that it acts, but not how it acts; and, with regard to the mesmeric process, apparently so immaterial, it not only acts through the nervous system, but its effects are capable of being produced by other and more material means, as the contact of a magnet, or of a crystal, or of the wire through which the electric current is passing, or of the human hand, as well as by passes made at a certain distance from the body. Mr Braid has even shewn, that the mesmeric sleep and other mesmeric phenomena (excepting, however, the highest, which he has not produced), may be caused by the

patient's acting on himself, either by fixing the eyes on a

point, or by concentrating the thoughts on the subject.

Of course the remedial efficacy of Mesmerism is likely to be exaggerated by those who have witnessed or experienced But the same remark applies to all new remedies, and cannot justify us in refusing to try them. An agent which has so powerful an effect on the nervous system, ought to be made the ally of the physician; and the less understood and the more dangerous the power is, the more is it the duty of the physician to study it with care. The best precaution against its abuse is the fullest possible knowledge of it. the whole, we must confess, that medical men have been very far from attaching due weight to the evidence produced in favour of the curative powers of Mesmerism. Considering its direct and powerful influence on the nervous system, we should naturally expect to hear of its efficacy in diseases of that system; and, accordingly, we find that the alleged benefits of Mesmerism have been chiefly in cases of epilepsy, paralysis, hysteria, neuralgia, melancholia, and mania. Surely where other means have failed, as they too often do in such diseases, we are bound to try this remedy, were it merely on account of the respectable testimony by which it is recommended.

With regard to the use of Mesmerism in surgical operations, the introduction of ether, as a means of producing insensibility to pain, will very much limit its employment. There is, however, much reason to conclude, that the state induced is the same in both methods; and, if so, we must be prepared for the occurrence of very great varieties in the effects of the ether. It is highly probable that cases will present themselves which will not yield to ether; and some of these may yield to Mesmerism. Cases also may occur in which ether is injurious, and in which Mesmerism may be safely employed. It is also to be expected, that a careful study of the phenomena produced by the inhalation of ether will throw much light on the mesmeric phenomena.

Having thus gone through the circumstances connected with the reception of Mesmerism, it appears that it was at first rejected, not for want of evidence, but because men's minds were so prejudiced as not to give the evidence a fair consideration; that the evidence, being exactly such as is required in all other branches of natural science, is gradually producing a general conviction of the truth of Mesmerism; that to admit the lower phenomena, and, with regard to the higher, to assume mala fides on the part of all

mesmeric observers and writers, would lead to endless difficulty and contradiction; that we are not entitled, even when an alleged fact appears to us incredible, to impute fraud to the reporter; and that, where prejudice has not been active, as in the example of the inhalation of ether, the alleged discovery has been received and treated precisely as all alleged discoveries in natural science, including those of Mesmerism, ought to be. As there is no difference between the evidence in the two cases, sufficient to justify the opposite reception they have met with, we cannot avoid the conclusion, that, after some time, the evidence in favour of Mesmerism will produce its full effect, and that the subject will be studied, in all its departments, precisely as any other branch of natural science is.

W. G.



